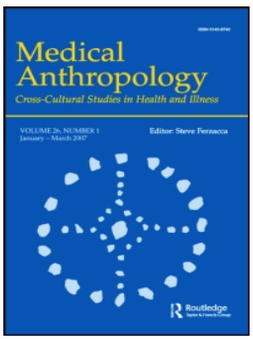

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Medical Anthropology

Cross-Cultural Studies in Health and Illness

ISSN: 0145-9740 (Print) 1545-5882 (Online) Journal homepage: http://www.tandfonline.com/loi/gmea20

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To cite this article: Megan Wainwright (2017) Sensing the Airs: The Cultural Context for Breathing and Breathlessness in Uruguay, Medical Anthropology, 36:4, 332-347, DOI: 10.1080/01459740.2017.1287180

To link to this article: http://dx.doi.org/10.1080/01459740.2017.1287180

Accepted author version posted online: 07 Feb 2017.
Published online: 07 Feb 2017.

MEDICAL ANTHROPOLOGY
2017, VOL. 36, NO. 4, 332–347
http://dx.doi.org/10.1080/01459740.2017.1287180

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Sensing the Airs: The Cultural Context for Breathing and Breathlessness in Uruguay

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ABSTRACT

The sensory experience of breathing, particularly the sensation of breathlessness in the case of chronic obstructive pulmonary disease (COPD), is a rich though understudied topic in medical anthropology. Fieldwork in Uruguay made it clear to me that to study the sensorial experience of breathlessness, I would also have to study the widely shared cultural conceptualizations and practices surrounding air, breath, and health. In this article, I illustrate ethnographically how the experience of breathing and breathlessness is closely tied to perceptions of air outside the body – in particular humidity, temperature change, wind, and contamination. In conceptualizing breath as the mechanism and air the medium for environmental embodiment, I bring together sensorial medical anthropology, anthropology of the body, and the anthropology of wind and climate. My findings, in light of similar findings across contexts, suggest that a body transformed by COPD is hyperperceptive and hypersensitive to changes in air.

KEYWORDS

Uruguay; air; breath; COPD; phenomenology; sensorial anthropology

SPANISH ABSTRACT

La experiencia sensorial de la respiración, particularmente la falta de aire en el caso de la enfermedad pulmonar obstructiva crónica (EPOC), es un área de la antropología médica que merece más atención. Me di cuenta en Uruguay que no podría estudiar la experiencia sensorial de la falta de aire sin estudiar las creencias y prácticas asociadas al aire, la respiración y la salud. Aquí muestro etnográficamente cómo la experiencia de la falta de aire está relacionada a la percepción del mismo – en particular a su humedad, cambio de temperatura, viento y contaminación. Conceptualizando a la respiración como el mecanismo y al aire como el medio de la encarnación del ambiente, integro la antropología médica sensorial, la antropología del cuerpo y la antropología del viento y clima. Mis resultados, junto con resultados de otras investigaciones, sugieren que la EPOC transforma el cuerpo y hace que sea híperperceptivo e hípersensible a los cambios en el aire.

FRENCH ABSTRACT

L'expérience sensorielle de la respiration, en particulier la sensation d'essoufflement dans le cas de la maladie pulmonaire obstructive chronique (MPOC), est un sujet riche mais peu étudié en anthropologie médicale. Le travail en Uruguay m'a fait comprendre que pour étudier l'expérience sensorielle de l'essoufflement, il faut aussi étudier les conceptions et pratiques culturelles entourant l'air, la respiration et la santé. Cet article illustre ethnographiquement comment l'expérience de la respiration et de l'essoufflement est étroitement liée à la perception de l'air qui est à l'extérieur du corps - en particulier l'humidité, le changement de température, le vent et la contamination. En conceptualisant la respiration comme le mécanisme et l'air comme le médium pour l'incarnation de l'environnement, je réunis l'anthropologie médicale sensorielle, l'anthropologie du corps et l'anthropologie du vent et

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du climat. En comparant mes découvertes à d'autres, je conclus en suggérant qu'un corps transformé par la MPOC est hyperperceptif et hypersensible aux changements de l'air.

Life is bracketed by our first and last inhalation of air. Over the course of that lifespan, different human beings will be more or less aware of their breathing. Athletes, yogis, and people with chronic respiratory problems are among those who become intimately aware of breathing. In these cases, breathing goes from being an automatic, unconscious function to a sensation. Breathlessness, or feeling short of breath, is described by Hinton, Howes, and Kirmayer (2008:146) as a polymodal sensation made up of "muscle-and-tendon-tension (e.g., in the respiratory muscles in the chest or neck), temperature (e.g., a hot day), skin-pressure (e.g., a feeling of the stomach not rising as one inhales), gastrointestinal-tract-distension (e.g., the abdomen being distended, preventing normal inhalation), and O_2 and CO_2 senses." Senses and sensations are a growing topic of anthropological inquiry (Howes 1991; Pink 2015; Porcello et al. 2010; Throop 2010), yet explicit works on breathing and shortness of breath are few. Ingold's (2007, 2010) work on breathing, walking, and air, Harper's (2004) political-ecology of breathlessness, and Lande's (2007) ethnographic exploration of learning to breathe like a soldier, highlight the rich potential of the topic. Outside of anthropology, breath has been studied phenomenologically as a therapeutic practice (Edwards 2006; Ekerholt and Bergland 2008), in relation to smoking (Dennis 2006) and in the context of lung disease (Carel 2008; Clarke 2002). While the experience of breathlessness is clearly an important topic emerging in all the qualitative literature on chronic obstructive pulmonary disease (COPD), very few have explicitly analyzed the experience of breathlessness (Bailey 2004; DeVito 1990; Heinzer, Bish and Detwiler 2003).

My ethnographic fieldwork in Uruguay was concerned with the ways in which breathing is disrupted in the context of living with COPD. COPD is defined as largely irreversible airflow obstruction caused by a combination of emphysema and chronic bronchitis and is quickly becoming the third leading cause of death worldwide (WHO 2013) although "it is still relatively unknown or ignored by the public as well as public health and government officials" (GOLD 2011:iii). In addition to smoking, there is increasing evidence that other environmental factors, such as indoor and outdoor air pollution, might not only aggravate COPD but also cause it too (Kurmi et al. 2010). Inhalation of any source of carbon monoxide, including that produced from wood-fire smoke for heating or cooking, can lead to the deterioration of lung tissue causing airflow limitation and symptoms of COPD including breathlessness or feeling short of breath, cough, fatigue, and sputum production. In Montevideo, where epidemiological studies were conducted, COPD prevalence has been linked to exposure to first- and secondhand tobacco smoke, exposure to dust in the workplace, coal, and wood-fire smoke (Muiño, Lopez Varela and Menezes 2005). At the time of this study, the capital of Uruguay had the highest prevalence of COPD compared to four other capital cities in Latin America (Menezes et al. 2008). However, we know little from these studies about the experience of COPD's most common symptom: breathlessness.

This study of living with and caring for COPD in Uruguay was conceptualized as a contribution to the anthropology of chronicity (Manderson and Smith-Morris 2010) dealing with a relatively under-researched illness in an under-researched country. From the early months of fieldwork, the inability to separate the experience of pathological breathlessness from the commonly shared ideas about breathing the air more generally became apparent. Breathing and breathlessness were about air. In this article, I illustrate through ethnography how breathing and breathlessness were closely tied to perceptions of the air outside the body. In interpreting these connections, I look to the anthropological literature on wind, weather, and climate for insights on breathing.

Theorizing breath in the anthropology of air and climate

ngold (2007:S34) argues that there is no such thing as objects in the open world and that to be in the open world is to mingle in the wind and weather. In this world, he says that there is no separation between earth and sky, and humans inhabit both. His reflection on breathing is particularly salient. He says, "Fundamental to life is the process of respiration, by which organisms continually disrupt any boundary between earth and sky, binding substance and medium together in forging their own growth and movement" (S19). Low and Hsu (2007) also speak of how the external phenomenon of wind is linked to the internal experience of breathing. Breath and wind are connected, in that, we inhale and expel the winds (air): "Inspiration is wind becoming breath, expiration is breath becoming wind" (Ingold 2007:S31). Hsu (2007) grounds the experience of *Qi* in early and medieval Chinese history in phenomenological terms. She says:

> Feeling the airs and winds is a pervasive experience, breathing a *sine qua non* of life. We feel it inside out, tactually as it strokes our skin, warms us up, cools us down, rhythmically relaxes and lulls; panting, we hear it; pounding, wheezing, it squeezes us. Violent, it hits, whips, whistles; hard, dry, soft, gentle, subtle, barely perceptible, elusive, it disintegrates, shudders, vanishes. (S130)

Ogawa (1998:322), in an earlier article, similarly contends that "*qi* is a kind of wind, a wind of breathing."

In their edited collection, Strauss and Orlove (2003) exemplify the ways in which cultural frameworks shape how people experience, talk about, and interpret weather and climate. They say, "we have often noted a comparison between the study of the human body and the study of the natural world" (55). Yet, their volume focuses predominantly on perceptions of climate change and associated practices, and it falls short of drawing a more direct relationship between embodiment and the interpretation of weather and climate. Subsequent works on climate have drawn on notions of environmental citizenship (Orlove et al. 2011), socio-materiality, and biopolitics (Knox 2014) to explore the cultural politics of climate change and climate information. While there is less focus on the sentient body in these works, other works concerned more generally with climate, wind, and air, both historical and contemporary, have highlighted the links to health and breathing (Crandon-Malamud 1991, Golinski 2016, Hinton et al. 2003, Jankovic 2007; Strauss 2007). For example, Hinton and colleagues' (2003) phenomenological study of "Hit by the Wind" syndrome among Vietnamese refugees illustrates the link between the interpretation of wind and weather and shared embodiment of past traumatic events. More recent work by Shove and colleagues (2014) has extended our understanding of the relationship between bodies and the environment by bringing the material world into the analysis. They focus on the dynamic thermal interactions between humans and things, to demonstrate how the quest for 'room temperature' is not solely a question of a socially constructed experience of bodily comfort but of maintaining the right conditions for machines. In their analysis, there are no clear boundaries between the computer chip, the human body, and air.

The ways in which people experience, discuss, and interpret the weather are not solely shaped by cultural frameworks but also by the physical body. The study of the experience of breath connects the study of the human body, the built environment, and the natural world, including the atmosphere. I theorize that experiences of changes in weather/climate are embodied, not only in the sense that changes in the environment may affect the body and health but also that transformation of the body, for instance through disease, can make a person more sensitive to and perceptive of the environment. In doing so, I draw a theoretical line between a sensorial anthropology, the anthropology of the body (Lock 1993; Mol 2002; Throop 2010; Wentzell 2013), and the cultural anthropology of air/wind and climate. Following Nichter's (2008:166) premise for sensorial medical anthropology, this ethnographic account demonstrates how the sensation of breathlessness is "experienced phenomenologically, interpreted culturally and responded to socially."

Method

The study's full methodology is described in detail elsewhere (see Wainwright 2013). For the purpose of this article, the data I drew on came particularly from fieldnotes of participant observation in homes, clinics, hospital wards, smoking cessation clinics, and pulmonary rehabilitation sessions, with some cross-referencing from recorded interviews gathered over the course of 13 months in Montevideo and Tacuarembó in 2010 and 2011. A pilot field trip in 2009 illuminated the everyday distinction made between the 'capital' (Montevideo) and the 'interior' (everywhere outside Montevideo) and inspired a multisited approach. The cities distance from each other (400 km), populations (1.5 million and 55,000), and the availability of private and public health care in both were primary reasons for their selection as field sites. I carried out the fieldwork in Spanish, and the English translations appearing here are my own.

I used NVivo9 (QSR 2010) to code all the descriptions, observations, and informal conversations, written-up in fieldnotes, into topics and subtopics. The topics of air, humidity, weather, climate, and breathing were pervasive and provided an overall context for the experience of COPD. I engaged throughout fieldwork and in this article with the idea of my own body as a tool and drew on my own experiences of my breath and breathing in a place that was new to me (having spent most of my life in Canada). By observing where my own bodily perceptions and interpretations of the climate differed from the Uruguayans I interacted with, I came to reflect on the salience of somatic modes of attention (Csordas 1993).

Air talk in Uruguay: Historical and contemporary manifestations

My introduction to 'air talk' in Uruguay began when my friends and acquaintances in Montevideo expressed their disbelief in me wanting to go to the interior and to Buenos Aires in the height of summer. "There is no air there [Interior]" and "you will die of heat, there is no air, they did not build the city [Buenos Aires] on the coast," I was told. People from Montevideo need the coast because "without the air from the coast, they feel uncomfortable." Those who can afford a holiday go to the eastern beaches to enjoy the sea breeze, often said to be 'purer' air. Trying to situate this historically, it is said that the 'discovery of the coast' by Uruguayans, or more precisely *los Montevideanos* (people from Montevideo), blossomed during the presidency of Batlle y Ordóñez in the early 1900s (Giaudrone 2011:372). The *Batllista* period (Batlle y Ordóñez presidency 1903–1907 and 1911–1915) included a number of policies considered key in the project of building a cohesive national identity out of the fragmented society of the late 1800s (Coraza de los Santos 2008). Barrán (1989–1990) explains that health and hygiene were central to the process of nation building, medicalization, civilizing, and morality occurring from the second half of the nineteenth century to the 1920s. The symbolism of healthy air is apparent in these projects. Barrán refers to a process of disciplining the body, which not only involved cleanliness but also exercise, and a number of the city's largest urban parks were established around this time. One of these parks, now named after Batlle y Ordóñez, is referred to as 'the lungs of the city' (Alvarez Montero and Prats 2007:34). Another central feature of Montevidean life, the *Rambla* (coastal promenade), was described by the developers as a project of 'opening the front windows of Montevideo' (Antola and Ponte 2000:237). The wind from the coast was not always thought to be health- or comfort-inducing, however. Wind caused the *Platano* trees lining the downtown streets of Montevideo to disperse their pollen, causing troubling allergies.

Just as capital dwellers thought of their air as fresh and plentiful in contrast to Buenos Aires and the interior, Uruguayans in the interior claimed that their air was better than the contaminated air of the capital, even those in the interior who lived outside the provincial capitals made a distinction between their pure and clean country air and that of *el pueblo* (the town). The industrial boom of the late 1800s saw, among others, British investment and trade in the cattle processing industry and the creation of railways (Winn 2010). The country also boomed in the First and Second World Wars

when it produced and sold goods needed for the war effort (e.g., wool, canned meat, leather). While this early industrial development was mostly confined to the capital, in recent decades, the interior has seen an expansion in a number of industries, including mining and forestry. In one rural area, I sat in on a community meeting with representatives of a forestry company and heard residents complaining about the dust the big logging trucks churn up as they drive up and down the unpaved roads. On a rural medical round, residents told me about how they associate recent cancer cases in the community to pesticide spraying in the area. Clearly, air has been and is increasingly a political topic in Uruguay. The work of Renfrew (2009) on lead poisoning in Montevideo, and on wider neoliberal reforms and industrial waste issues throughout the country (and region), is testament that Uruguayans are rightly concerned about *contaminación* (contamination) and the effects, known and unknown, that it has on their bodies. In this article, contamination is one of four characteristics of the air related to health mentioned by people I met in Uruguay. The other three, presented in the next section, concern air in relation to climate and weather.

Air talk is closely linked to weather– a pervasive topic of conversation. Uruguay's history of favorable weather for the region (i.e., historically spared the devastation of earthquakes or hurricanes) is interwoven into the narrative of Uruguay's relative financial and social 'success' as compared to its neighbors. In the words of an artisan I met: "The education system taught us that our country was almost perfect. There are no natural catastrophes, it is a pleasant country." Conceptualizing a link between political climates and a favorable environmental climate is not unique to Uruguay (Golinski 2016), but in the case of Uruguay, the construction of an identity of 'middleness' and exceptionality is traced to the Battle y Ordóñez era (Coraza de los Santos 2008; Merenson 2012). Yet, with climate change and more frequent extreme weather events, the idea of exceptionality is being called into question. A director of a hospital explained to me how climate change is changing the epidemiology of COPD:

> Before in Uruguay we had four very distinct seasons. Now we can get quite cold weather in summer and hot weather in the winter. Pneumonia rates [common in COPD patients] in the hospital usually peaked in June and July [winter] but this month [September] we've had more cases than any other month.

While climate change was not widely evoked in my conversations in Uruguay about COPD, as its effects are felt, and media coverage of it expands, climate change discourse is likely to increasingly permeate and shape Uruguayan perceptions of climate and air. At the time of this study, however, Uruguayans I met were most concerned about humidity, temperature change, wind/drafts, and contamination.

Air and the body in Uruguay

Here I illustrate these four characteristics of the airs by drawing on my fieldnotes of conversations and observations among people both with and without COPD. This is because I soon observed that people with COPD complained of and were weary of airs that others were generally weary of too. However, people with COPD were more severely affected, and they and others felt greater care and protection from these airs was needed to avoid exacerbation of their respiratory condition. Some believed exposure to these airs caused COPD in the first place.

El tiempo feo: Humidity

Although directly translated as ugly weather, *el tiempo feo* refers to horrible, dreadful, or bad weather. Early on in fieldwork, I began noticing how often tiempo feo and humidity went hand in hand in the discourse of most Uruguayans I met. Uruguay has a temperate climate and I found Uruguayans speaking of the horribleness of humidity (with or without rain) throughout the year. In the summer, striking up conversation was as easy as exclaiming *que calor* (wow, it's hot!) and in the winter, *que frio* (wow, it's freezing!). Hearing *hay mucha humedad* (there is a lot of humidity), *que*

humedo (wow, it's humid!), or *es la humedad que mata* (it's the humidity that kills you) traversed all seasons. When humidity was accompanied by extremes of hot or cold, the day was considered particularly *feo* and required even more safeguarding, as will be illustrated.

Humidity was seen to be particularly problematic for breathing. I was told over a Sunday lunch with friends, "Uruguay is a humid country, that is why there is so much bronchitis and asthma. Doctors say that if some kids were living in different climates probably they wouldn't have those problems." Another friend told me that many children in Uruguay have asthma because of the 'humid conditions' in which they live; when she referred to 'humid conditions,' she was not only referring to the humid country but also to the humid microclimates of regions, neighborhoods, homes, and workplaces. That humidity could be assessed at the national level, local geographical level, and the microclimates of work and home is important (Shove et al. 2014). A health professional made a contrast between the air of the hospital and the air of the home when he said to me:

> Here, the COPDs (*los [sic] EPOCs*) are great, it is when they return to their homes … the humidity, the cold.… You'll see some patients will ask to stay here because they have a bed, food, they are comfortable and they don't want to leave. We call that hospitalism. (*hospitalismo*)

Although he was making a clear comment about the poverty experienced by their patients and the precariousness of their homes, he was also commenting on how the qualities of air (cold and humid) that people breathe affect them.

This was repeatedly backed up by statements like "humid days are the worst thing you can have for the bronchial tubes" and "it's the humidity that kills you" from my research participants with COPD. A social worker in a respiratory team meeting discussed the homelife of one of the research participants and said, "he lives in a really humid zone of the city." A doctor I shadowed in Tacuarembó would often say to her respiratory patients, "it's the humidity these days that's affecting you, isn't it? Stay inside," and depending on the day, would advise her patients, "today it is a humid day, don't go out." In Montevideo it was well understood that if it was very humid or rainy, pulmonary rehabilitation would be cancelled. When a participant in her 50s experienced her first hospitalization and transfer to intensive care for an acute exacerbation, her father, who also had COPD, exclaimed to me: "For days she was running all over the place, leaving work at 7 or 8 at night, with this humidity! She is stubborn. I've lived for years with this [disease], I know what I'm talking about!"

Steam, particularly from the shower, was also mentioned by a number of my participants as causing a sensation of suffocation and was mentioned by participants in at least two other studies from different contexts, as a risk factor needing to be controlled or avoided (Barnett 2005; Nicholls 2003). This lends support to the idea that a body with COPD is hyperperceptive of and hypersensitive to humidity.

From people with COPD, to health professionals, to university students, to homemakers, and farm workers, I was repeatedly told that humidity is bad for your breathing. When I began to question how it is they *know* it is humid, I reflected on my own experience of the air. Sometimes I just could not feel the humidity people were telling me about on a particular day. I felt like I had been to countries far more humid than Uruguay. Then, one day when telling a friend I just could not *feel* the humidity, she responded, "I know it's humid because my painting just won't dry." I began noticing other such anecdotes such as "it's so humid today, the floors just won't dry" or "the clothing on the line is taking a long time to dry." I came to understand that humidity is not just *felt* in Uruguay, it is something people can *see* and experience in the home through a variety of senses. Humidity is a multisensory experience. It is not only perceived with the eyes, or through the sensation of dampness or cold on the skin, but also through breathing. This perception and assessment of humidity frequently begins in the home.

The typical lower income home in the interior is made of cement with a slanted tin roof (Figure 1). In Montevideo, most people live in apartments or attached houses, many of which retain the Spanish colonial architecture including patios and courtyards to enhance ventilation

Figure 1. A typical *casa humilde* (humble home) in Tacuarembó.

and light (Berjman 2008). It is only in the last 10 years or so that the purchase and use of air-conditioning has become more common among the wealthy, especially in newly constructed homes (Figure 2). Otherwise, homes are generally not sealed shut nor centrally heated. This made the boundary between outdoor weather and the indoor microclimate of the home rather permeable. Lower income households, with more precarious housing, live with much more humidity and cold in their homes than the upper and middle classes. I experienced these differences personally in living in a variety of homes along the economic spectrum. The contrast of warm days and cold nights (the coldest I experienced was −7°C), in addition to steam from cooking and bathing, all contribute to indoor humidity, and illustrate what Shove and colleagues (2014) call the fluxes and exchanges of thermal energy between people, air, and the material world. Condensation on windows and mold were other common signs of humidity indoors. These were signs you not only saw but also smelled.

For people with COPD in my study, the meaningful biomedical intervention for an episode of congestion or exacerbation was the nebulizer (a device that delivers a bronchodilator through mist). While humid air is perceived to be bad for breathing, the nebulizer's therapeutic potency comes through a humid mist, and so clearly, there was something different about humidity 'out there' in the air, and humid, medicated air aspirated via a nebulizer. Humid air is not just air that is moist, it may also be air filled with other particles. Tacuarembó city center had a heavy mist at night in the winter, thickened not only by condensation but also by wood-fire smoke, an example of how "substances of the earth mingle and bind with the medium of the air" (Ingold 2010:S130). Surprisingly, wood-fire smoke (from heating) was never mentioned to me as an aggravator of respiratory symptoms, perhaps because it was so ubiquitous or domestic that it was not considered a threat.

Figure 2. A two-story home in Tacuarembó that stood out for its modern style and symbolism of wealth.

Through breath, the humid climate is embodied, and if it is a localized climate (e.g., a time of day or a place), a person with COPD will try to avoid it. For Patricia, a single mother of three, avoiding indoor humidity was impossible in her tiny, government-built house, so in her words, "if let's say I wake up, there's humidity and I go to the bathroom and I can't breathe, I start doing what it would be like if I was hospitalized, the same thing: the nebulizer, in bed." She spent most of the winter at home, in bed, bracing herself against the humidity.

Temperature change and the body

A very common conception among Uruguayans I met was that rapid temperature change negatively affects the body and can cause illness. I was told not to sit too close to the fireplace and get 'too hot,' and then move away from it suddenly, and especially not to sleep with my head near the fireplace – something rural children confirmed when I asked them what their grandmothers tell them to do to avoid getting sick. I also witnessed children being scolded for putting their bare feet on the cold floor. I learned from a *curandero* (healer) in Tacuarembó that the condition *golpe de aire* (being hit with air) was a frequent and important health complaint. I asked him to explain how being 'hit with air' makes someone sick and he responded:

> Pneumonia is caused by being hit by cold air. If you are in a hot place and are hot and you breathe in cold air you get congestion, and if it isn't well treated it ends up being pneumonia. Also, being hit by cold air affects the muscles. For example, a person who is working in the heat and there is a drastic change in temperature, it affects the muscles. With heat, the muscles increase in volume, with cold they contract. That movement, all of a sudden, affects you. Therefore, we call it 'air' as in 'caused by air', the scientific word is torticollis.

One treatment for the condition involves incantations being spoken while a hot coal is dropped into water. The steam the coal emits as it hits the water is a symbolic visualization of the release of cold air trapped in the body. Unlike the Vietnamese studied by Hinton and colleagues (2003), the Uruguayans I met did not consider death a possible result of golpe de aire, but they did expect it to lead to congestion, coughs, colds, flu, and muscle and joint pain.

I learned a lot about shared practices for avoiding the effects of temperature change by living with a woman in her 70s. We mostly heated the house in the morning and at night with the fireplace but also used an electric space heater to add some warmth to her bedroom while she watched TV, or to heat the bathroom before showering. This practice not only made stepping out of the shower less uncomfortable in winter but also it protected us from drastic changes in temperature, which might cause a *golpe de aire frio* (being hit with cold air). Cold drafts were also avoided, and people dressed warmly inside and outside their homes in winter. In addition to avoiding getting 'too hot' by sitting too close to the fireplace or standing in the sun without a hat, she, like so many Uruguayans I observed, covered her mouth with a scarf when she moved from the house to the outdoors. This lessened the shock to the body caused by inhaling a different temperature of air.

Concern over hot and cold suggests an underlining humoral theory of health and illness common among Spanish-American populations (Crandon-Malamud 1991; Foster 2009; Rubel and Moore 2001). Yet, cold and wind have been shown to be more bothersome for people with COPD as compared to asthmatics (Small and Lamb 1999) and careful reading of the narratives in the qualitative research on COPD shows that taking care by avoiding cold and temperature extremes is also a practice reported by participants in Taiwan (Chen et al. 2008:602; Jeng et al. 2002:170), Australia (Gullick and Stainton 2008:610), and the United States (O'Neill 2002:299). Therefore, while changes in temperature hold particular significance in Uruguay, the common experience across cultures and contexts suggests that a body altered by COPD may be hypersensitive to cold. My participants with COPD and their family members were deeply concerned with avoiding the threat of rapid temperature change.

Wind and breathing

Wind can be many things. As already mentioned, wind can be a menace for its agency in dispersing allergens. Within the home, air currents are a particular kind of wind. Cold drafts were generally disliked and avoided – linking wind and temperature discussed above. A draft, which might cause a sneeze, seemed to attract attention. If my housemate in Montevideo heard me sneeze, she would come see me and say, "oh, it must be the draft, I'll close the window." I was not particularly aware of, or bothered by the sneezing, but it appeared that maybe I should have been. Clearly, I was missing the somatic mode of attention to my sneezes and their significance (Csordas 1993).

For my participants with COPD, wind was experienced in different ways. While cold drafts were generally distrusted, air currents caused more ambiguous reactions. For example, a gentle breeze inside, produced by a fan or by opening a window, could be therapeutic; onward-facing winds while outdoors could make you feel suffocated. Sensitive responses to wind tended to come from participants who had severe COPD or who had suffered an acute exacerbation requiring hospitalization. I remember being surprised the first time an elderly woman with severe COPD said to me, "I hate the wind, wind is bad for me, I feel like I am suffocating." She explained that if there was wind, she stayed inside. While *me falta el aire* (I am lacking or out of air/breathless) implied too little air, having wind blown into the face was 'too much air' that made one feel *ahogada* (suffocated).

Physiologically COPD obstructs exhalation; therefore, it seems that sensorially it is suffocating to exhale against wind gusting into the face and mouth. On the other hand, a gentle breeze could be therapeutic. One woman suspected of having COPD told me: "All of a sudden last night without warning I became very breathless and I could hardly breathe. I barely slept all night. My husband was home and he blew a fan at me to give me some air. Eventually I fell asleep and was feeling better in the morning." Another man would bring fans to the hospital. His doctor told me, "what this

patient needs is air being blown up his nose; he needs to feel that air is going in." For someone who feels that they lack air and oxygen, generating wind that they feel on their bodies seems to generate a sense that there *is* air to be breathed. This resonates with Williams and colleagues' (2011:1245) study in the south of England, where interviewees with COPD expressed the therapeutic benefit of fresh air and the detriment of stagnant air. The authors suggest that it is not only about how these conditions made people feel but also how interpretations of these environments shaped participants' perceptions and interpretations of their symptoms.

Aire contaminado: Discourse of change and contaminated air

Talk of air, breathing, health, and climate in Uruguay was also wrapped up in narratives of environmental change, both local and global. During smoking cessation group therapy, smokers trying to quit frequently voiced their perception that "these days there is so much horrible stuff in the air that isn't good for you, it's not just smoking." One smoker trying to quit responded to the doctor's explanation of the dangers of carbon monoxide inhaled through smoking with "yes, but we go out on the street and breathe in all kinds of things." Similarly, one day when having a coffee with the wife of a participant in my study, I asked her whether she used to smoke. Her response was, "yes, I smoked a bit in university, but back then the environment wasn't filled with as many toxins as it is today."

These kinds of comments suggest that some might perceive smoking these days to be more dangerous than ever because of the extra chemicals one breathes every day. It may also be an indication that ex-smokers have narratives that support the 'it wasn't that bad for you back then' stance. Furthermore, this concern with increasing contamination was not a uniquely urban phenomenon. When I accompanied a rural doctor on her rounds of the Tacuarembó countryside, a man in a small village of 300 people told me that there are not as many people reaching old age as there used to be, he explained, "because of contamination [pollution]; there is much more [contamination] than before." The village only had electricity for 15 years and so like many villages in the interior, it had experienced dramatic transformation and modernization in the very recent past. As Harper (2004) reminds us, perceptions of risk when it comes to air are context specific. In Uruguay, it seemed the country and the city were increasingly connected by shared concerns about pollution, linked both to industrial development and agriculture.

Dirty air took on another dimension and visibility when the Puyehue volcano erupted in Southern Chile on June 4, 2011. The successive eruptions and masses of volcanic ash created an ash cloud that reached southern Argentina and Uruguay and disrupted air travel. A flight I had booked back from a short break to Chile was cancelled on July 8 (over a month after the first eruption) because of the ash cloud over Uruguay, not Santiago. A light dust covered cars in Montevideo. On a rural health care round in the department of Tacuarembó on June 13, I witnessed the sky to be so full of ash that you could barely see trees in the distance and the sun was almost blocked out in the white hue, making it look more like the moon than the sun. The volcano was the talk of the town. Most homes I visited, even the most impoverished, had a television and a radio, and news spread quickly through these mediums. There were media releases and warnings that parents should keep their children indoors, especially children prone to asthma. More ubiquitous forms of air pollution, including industrial and occupational dusts and chemicals, were less likely to make a headline than a volcano erupting – a point echoing Harper (2004) – but the causal narratives of some participants showed that these threats are highly significant when it comes to making sense of why one 'got' COPD.

Intersections of temperature change, contamination, and humidity in the causal narratives of COPD

In discussing the causes of their COPD, a number of participants drew links between their COPD and the contamination, humidity, and variability of the air they were exposed to, particularly as a result of their employment. Juanita, who lived in a luxurious high-rise apartment in a trendy part of

Montevideo, spoke of smoking only when I asked her about it. Otherwise, her causal narrative mostly concerned the air she breathed at work. Like many people with severe COPD, while seated (i.e., while not physically exerting herself), her disease was virtually invisible. However, any physical exertion revealed her serious limitations, namely breathlessness. She explained how she ended up with COPD in the following way:

> I used to work in a job that involved walking around dark warehouses in the port, going from hot to cold and from cold to hot while breathing in the exhaust of the machines moving cargo around. It was an unhealthy environment.

A similar story came from Mateo, a man essentially at the opposite end of the economic spectrum to Juanita. He was a 36-year-old father of three who lived with his wife and children in a one-room cement home with an outdoor kitchen and toilet, in an informal settlement on the outskirts of Montevideo. He was oxygen dependent and had been unable to work for some time. His last job was as a *recyclador* (or *clasificador*), an informal job involving traveling on a horse-drawn carriage through the city streets picking sellable materials out of the dumpsters such as plastics, cardboard, glass, and food scraps for urban pig farming. When I asked Mateo whether he thought smoking caused his COPD, he responded:

> I don't think so. I think all the years of working as a recyclador and having to withstand the hot, the cold, and the wet conditions did this to me. Also, malnutrition lowered my defences [immune system]. When you're a recyclador you have to get out and work every day to survive, whether it is cold or raining. I would go out for at least 8 hours a day but not at set times.

Marcelo, who died of COPD during fieldwork at the age of 54, worked for close to 12 years for a tobacco plantation company in Tacuarembó that closed over a decade before he became sick. When we spoke of his COPD he said: "You know, I worked in the tobacco-plant here with a lot of humidity. I worked in the humidification section for the leaves to keep them soft after having been dried." His wife added: "He also worked fumigating in the tobacco fields." Most participants, not quoted here, considered smoking a factor in causing or at least making their disease worse. However, some clearly felt that breathing bad air (not just contaminated with dusts or chemicals but that which was humid or variable in temperature) was largely to blame.

Breathless sensation as environmental embodiment

In this article, I set out to show how the sensation of breathlessness is "experienced phenomenologically, interpreted culturally and responded to socially" (Nichter 2008:166). In the case of breathlessness in Uruguay, the experience of this sensation is embedded within a cultural context in which air, its qualities, and its impact on health are attributed significant meaning. For this reason, I include here both what people with and without COPD had to say about air. In terms of the anthropology of sensations, starting the exploration of breath with people for whom it is no longer a taken-for-granted function of the body is productive, both for understanding the experience of breathlessness but also for attuning oneself to pay attention to the widely shared experiences and interpretations of breath. I found that there was a particular somatic mode of attention (Csordas 1993) at play that kept one alert to changes in airs, particularly temperature changes, humidity, and wind/drafts. These airs were responded to socially, for example, by being discouraged from going outside or by closing windows to minimize harmful drafts.

Investigating the sensation of breathlessness in Uruguay highlights how breathing and air (climate/weather) are intimately entangled, in that sensing the breath inside the body is sensing the air outside it. We exhale part of our body into the world and we inhale the environment into our bodies. It is therefore not only our eyes, ears, noses, and our taste buds which connect our inside bodies and minds to the outside world but also our lungs, adding breathing as an important focus for sensorial anthropology. While Morley (2001) frames breathing as a medium, Ingold (2010) frames air as a medium. I consider, in line with Ingold, that air is the *medium* and breathing the *mechanism* through which the outside

environment is embodied. Air carries the weather, climate, and particles from the environment into the body. Humans embody the climate of their environment through air, just as fish embody the climate of their environment through water. Of course we use many parts of the body to sense the airs around us. We perceive the climate to be humid because we see that the air is humid through condensation, feel the air to be humid on our skin, and touch things that will not dry. However, as people with COPD frequently reported, we can also know it is humid by feeling suffocated and feeling breathless, and this can vary based on the weather and the microclimates in which they find themselves. Equally, it feels cold because the air is cold. The air feels cold not only on our skin but as it enters our airways and causes them to constrict. When we say it is windy, it is because we can feel and see the air moving quickly, hitting us, moving us, and things around us. Air which moves fast – air that is wind – can also make it difficult to breathe. Air can be warm, cold, dry, humid, thick, it can be still or can move quickly, it can smell good or bad, it can be transparent or visible. A characteristic of air of particular concern to Uruguayans in this study was humidity, something not explicitly spoken about elsewhere in relation to sensations of breathing. The cultural importance of fresh air and the link between characteristics of air and health go back at least to the Batlle y Ordóñez era. While the issue of hot and cold resonates with commonly reported humoral theories in Latin America, the origin of the shared concern about humidity remains unclear and could be a topic of future research. Equally interesting is the fact that humid mist from a nebulizer was therapeutic. Combined with my observation that the thickness of wood-fire smoke in the air was rarely commented on, it is possible that there is a social emphasis on humidity at the expense of greater concern about some pollutants hanging in the air.

No matter what the air is like, we breathe it to live. So while we can take care to manipulate the temperature of air or its circulation (i.e., drafts or wind) or stay within an indoor climate that is less humid than an outdoor one, if the air is contaminated we can only partially avoid it if we can see it (i.e., stay indoors to avoid breathing in volcanic ash). "Lungs have the largest surface area in the body in direct contact with the environment" and this implies that lungs are 'open to the environment' and, therefore, susceptible to the harmful effects of foreign materials carried to their surface with each breath (Dartnell and Ramsay 2005:83). Moshenska (2010) describes that in times of war, gas masks acted like sociocultural and physical mediators between the self and others and the self and environment. In everyday life, there is no barrier between ourselves and the air we breathe. While contamination was only one of many characteristics of the air of concern to the Uruguayans I met, it merits further focused research, especially to understand how domestic pollution (tobacco and wood-fire smoke) contrasts with industrial pollution in peoples' notions of risk and threat. People I spoke to may not be as aware of the dangers of occupational dusts and chemicals as they could be, considering the evidence of their association with COPD (Muiño et al. 2005). Equally, epidemiologists may also want to pay greater attention to air temperature and humidity not commonly assessed as risk factors in research participants. Also noteworthy is the ambiguity around wind and breathing in the context of COPD. While humidity, temperature change, and contaminated air were all categorically bad for breathing from the perspectives of people with and without COPD alike, wind seemed to have a distinct impact on people with COPD – either causing a sensation of suffocation or a comforting sense that there was air to be breathed. My findings, in light of similar findings across contexts referenced above, suggest that a body transformed by COPD is hyperperceptive of and hypersensitive to changes in air.

Conclusion

By adopting a sensorial and ethnographic approach to understanding the experience of COPD, it became clear that ideas in Uruguay about breathing not only concern the body but also the environment, particularly air. The qualities of air, whether humid, polluted or cold, are perceived to interact directly with the body and produce health effects. These beliefs are not implicit but rather explicit in everyday discourse in homes and clinics. Therefore, a strictly inner-body engagement with the sensation of breathlessness would be incomplete. An appreciation of the ways in which people sense their environment through their bodies, including their lungs,

through the mechanism of breathing, is fundamental. This analysis is an example of the insights gained from intersecting a sensorial medical anthropology of breath and the body with insights from the anthropology of wind and climate, and in so doing, contributes a new perspective to medical anthropology. While in this article I have focused on the sensation of breathlessness, other senses, such as sense of smell and taste, are also linked to breath and worthy of further investigation. As more research is undertaken on the complex sensation of breath, we will come to better understand how such a universal, automatic, and unconscious bodily function is at least in part, culturally situated.

Acknowledgments

Very sincere thanks go to all the Uruguayans who welcomed me into their country, homes, and institutions. Thank you also to Karen Rasmussen Kroch and Caroline Cormier for proofing the Spanish and French abstracts.

Funding

The research undertaken in Uruguay was funded by a Van Mildert College Trust Research Scholarship (2009–2012), a Postgraduate Travel Grant (2010) from the Society of Latin American Studies and a Santander Mobility Grant (2011) from Durham University, UK. Open-access publication was funded by the Wellcome Trust project 'Life of Breath: Breathing in Cultural, Clinical and Lived Experience' (grant number 103339).

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